GenCore version 4.5

OM protein - protein search, using sw model

Run on: June 24, 2002, 20:48:36 ; Search time 16.32 Seconds
(without alignments)
382.709 Million cell updates/sec

Title: US-09-664-326-23
Perfect score: 368
Sequence: 1 LTYTDCTESGQNLCLCEGSN.....PKPQSHNDGDFEEIPEEYLQ 65

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283138 seqs, 96089334 residues

Total number of hits satisfying chosen parameters: 283138

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_71:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	360	97.8	65	1	HULXH	thrombin inhibitor
2	353	95.9	65	2	S05674	hirudin IIb - medi
3	352	95.7	65	2	S78521	hirudin IIIb' - me
4	350	95.1	65	2	S05673	hirudin IIa - medi
5	348	94.6	65	2	S05676	hirudin III - medi
6	348	94.6	65	2	S05678	hirudin II - medic
7	346	94.0	65	2	S78520	hirudin IIIa' - me
8	345	93.8	65	2	S05677	hirudin IIIb - med
9	345	93.8	65	2	S05675	hirudin IIIa - med
10	343	93.2	65	2	S05679	hirudin II' - medi
11	333	90.5	72	2	A37417	thrombin inhibitor
12	315	85.6	66	2	A24350	thrombin inhibitor
13	288	78.3	55	2	S05672	hirudin I - medici
14	249	67.7	63	2	A53883	hirudin HV1 homolo
15	247	67.1	84	2	S33329	hirudin HM2 - leec
16	230	62.5	84	2	S33328	hirudin HM1 - leec
17	215	58.4	63	1	A42207	hirudin P6 - leech
18	173	47.0	62	1	HULXLM	hirullin P18 - lee
19	90	24.5	17	2	S05671	hirudin Ia - medic
20	74	20.1	2352	2	T30201	Notch homolog prot
21	69	18.8	1766	2	A42125	trophozoite cystei
22	68.5	18.6	1071	1	PXBYVA	H+-transporting AT
23	68.5	18.6	2233	2	T28669	surface protein 51
24	66	17.9	761	2	T09052	hypothetical prote
25	66	17.9	2150	2	T32497	hypothetical prote
26	66	17.9	5376	2	T42215	zonadhesin - mouse
27	65	17.7	558	2	T15448	hypothetical prote
28	65	17.7	1043	2	T19734	hypothetical prote
29	65	17.7	1661	2	T31330	head-activator bin
30	64	17.4	317	2	I46916	insulin-like growt
31	64	17.4	1743	2	T26859	hypothetical prote
32	63.5	17.3	318	2	A82319	glutathione synthe
33	63.5	17.3	474	2	S18452	variant surface gl
34	63.5	17.3	755	2	A44315	cartilage oligomer
35	63.5	17.3	1722	2	E89753	protein F11C7.4 [i
36	63.5	17.3	2321	2	S78549	notch3 protein - h
37	63.5	17.3	2703	1	A24420	notch protein - fr
38	63	17.1	80	2	T10183	antifungal protein
39	63	17.1	778	2	T05341	S-receptor kinase
40	62.5	17.0	513	1	JQ1486	activin receptor I
41	62.5	17.0	1820	2	A55494	latent transformin
42	62	16.8	79	2	T10243	antifungal protein
43	62	16.8	79	2	T07917	antifungal protein
44	62	16.8	80	2	T02621	probable antifunga
45	62	16.8	80	2	T02622	probable antifunga

ALIGNMENTS

RESULT 1
HULXH
thrombin inhibitor (hirudin) - medicinal leech
C;Species: Hirudo medicinalis (medicinal leech)
C;Date: 30-Nov-1980 #sequence_revision 03-Aug-1984 #text_change 07-May-1999
C;Accession: A91318; A94429; A60811; A01289
R;Dodt, J.; Muller, H.P.; Seemuller, U.; Chang, J.Y.
FEBS Lett. 165, 180-183, 1984
A;Title: The complete amino acid sequence of hirudin, a thrombin specific inhibitor.
A;Reference number: A91318
A;Accession: A91318
A;Molecule type: protein
A;Residues: 1-65 <DOD>
R;Petersen, T.E.; Roberts, H.R.; Sottrup-Jensen, L.; Magnusson, S.; Bagdy, D.
in Protides of the Biological Fluids, Proc. 23rd Colloq., Peeters, H., ed., pp.145-14
A;Reference number: A94429
A;Accession: A94429
A;Molecule type: protein
A;Residues: 1-65 <PET>
R;Mao, S.J.T.; Yates, M.T.; Blankenship, D.T.; Cardin, A.D.; Krstenansky, J.L.; Loven
Anal. Biochem. 161, 514-518, 1987
A;Title: Rapid purification and revised amino-terminal sequence of hirudin: a specifi
A;Reference number: A60811; MUID:87211066
A;Accession: A60811
A;Molecule type: protein
A;Residues: 1-32,'N',34-43 <MAO>
A;Note: the authors suggest that their identification of 33-Asn is correct and that 3
present a natural variant of hirudin
C;Comment: Hirudin is a potent thrombin-specific protease inhibitor.
C;Superfamily: thrombin inhibitor
C;Keywords: anticoagulant; sulfoprotein
F;6-14,16-28,22-39/Disulfide bonds: #status experimental
F;63/Binding site: sulfate (Tyr) (covalent) #status experimental

Query Match 97.8%; Score 360; DB 1; Length 65;
Best Local Similarity 96.9%; Pred. No. 7.8e-30;
Matches 63; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

```
Qy       1 LTYTDCTESGQNLCLCEGSNVCGQGNKCILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP 60
           : ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 VVYTDCTESGQNLCLCEGSNVCGQGNKCILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP 60

Qy      61 EEYLQ 65
           |||||
Db      61 EEYLQ 65
```

RESULT 2
S05674
hirudin IIb - medicinal leech
N;Alternate names: thrombin inhibitor

C;Species: Hirudo medicinalis (medicinal leech)
C;Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 17-Jul-1998
C;Accession: S05674
R;Scharf, M.; Engels, J.; Tripier, D.
FEBS Lett. 255, 105-110, 1989
A;Title: Primary structures of new 'iso-hirudins'.
A;Reference number: S05671; MUID:90005945
A;Accession: S05674
A;Molecule type: protein
A;Residues: 1-65 <SCH>
C;Superfamily: thrombin inhibitor
C;Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F;6-14,16-28,22-39/Disulfide bonds: #status predicted
F;63/Binding site: sulfate (Tyr) (covalent) #status predicted

Query Match 95.9%; Score 353; DB 2; Length 65;
Best Local Similarity 93.8%; Pred. No. 4e-29;
Matches 61; Conservative 4; Mismatches 0; Indels 0; Gaps 0;

```
Qy      1 LTYTDCTESGQNLCLCEGSNVCGQGNKCILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP 60
          :|||||||||||||||||||||:|||||||:||:||||||||||||||||||||||||||
Db      1 ITYTDCTESGQNLCLCEGSNVCGKGNKCILGSNGEENQCVTGEGTPKPQSHNDGDFEEIP 60

Qy     61 EEYLQ 65
          |||||
Db     61 EEYLQ 65
```

RESULT 3
S78521
hirudin IIIb' - medicinal leech
N;Alternate names: thrombin inhibitor
C;Species: Hirudo medicinalis (medicinal leech)
C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 17-Jul-1998
C;Accession: S78521
R;Scharf, M.; Engels, J.; Tripier, D.
FEBS Lett. 255, 105-110, 1989
A;Title: Primary structures of new 'iso-hirudins'.
A;Reference number: S05671; MUID:90005945
A;Accession: S78521
A;Molecule type: protein
A;Residues: 1-65 <SCH>
C;Superfamily: thrombin inhibitor
C;Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F;6-14,16-28,22-39/Disulfide bonds: #status predicted
F;63/Binding site: sulfate (Tyr) (covalent) #status predicted

Query Match 95.7%; Score 352; DB 2; Length 65;
Best Local Similarity 93.8%; Pred. No. 5.1e-29;
Matches 61; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

```
Qy      1 LTYTDCTESGQNLCLCEGSNVCGQGNKCILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP 60
          : |||||||||||||:|||||||||||||:||||||||||||||||||||||||||||||
Db      1 VVYTDCTESGQNLCLCQGSNVCGQGNKCILGSNGEKNQCVTGEGTPKPQSHNDGDFEEIP 60

Qy     61 EEYLQ 65
          |||||
Db     61 EEYLQ 65
```

RESULT 4
S05673
hirudin IIa - medicinal leech
N;Alternate names: thrombin inhibitor
C;Species: Hirudo medicinalis (medicinal leech)
C;Date: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 17-Jul-1998
C;Accession: S05673
R;Scharf, M.; Engels, J.; Tripier, D.
FEBS Lett. 255, 105-110, 1989
A;Title: Primary structures of new 'iso-hirudins'.
A;Reference number: S05671; MUID:90005945
A;Accession: S05673
A;Molecule type: protein
A;Residues: 1-65 <SCH>
C;Superfamily: thrombin inhibitor
C;Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F;6-14,16-28,22-39/Disulfide bonds: #status predicted
F;47/Inhibitory site: Lys (thrombin) #status predicted
F;63/Binding site: sulfate (Tyr) (covalent) #status predicted

Query Match 95.1%; Score 350; DB 2; Length 65;
Best Local Similarity 93.8%; Pred. No. 8.1e-29;
Matches 61; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

```
Qy      1 LTYTDCTESGQNLCLCEGSNVCGQGNKCILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP 60
          :|||||||||||||||||||||| |||| ||||||:||||||||||||||||||||||||
Db      1 ITYTDCTESGQNLCLCEGSNVCGNGNKCKLGSDGEENQCVTGEGTPKPQSHNDGDFEEIP 60

Qy     61 EEYLQ 65
          |||||
Db     61 EEYLQ 65
```

RESULT 5
S05676
hirudin III - medicinal leech
N;Alternate names: thrombin inhibitor
C;Species: Hirudo medicinalis (medicinal leech)
C;Date: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 17-Jul-1998
C;Accession: S05676
R;Scharf, M.; Engels, J.; Tripier, D.
FEBS Lett. 255, 105-110, 1989
A;Title: Primary structures of new 'iso-hirudins'.
A;Reference number: S05671; MUID:90005945
A;Accession: S05676
A;Molecule type: protein
A;Residues: 1-65 <SCH>
C;Superfamily: thrombin inhibitor
C;Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F;6-14,16-28,22-39/Disulfide bonds: #status predicted
F;63/Binding site: sulfate (Tyr) (covalent) #status predicted

Query Match 94.6%; Score 348; DB 2; Length 65;
Best Local Similarity 93.8%; Pred. No. 1.3e-28;
Matches 61; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

```
Qy      1 LTYTDCTESGQNLCLCEGSNVCGQGNKCILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP 60
          : |||||||||||||| ||||||||||||:||||||||||||||||||||||||||||||
Db      1 VVYTDCTESGQNLCLCEDSNVCGQGNKCILGSNGEKNQCVTGEGTPKPQSHNDGDFEEIP 60

Qy     61 EEYLQ 65
          |||||
Db     61 EEYLQ 65
```

RESULT 6
S05678
hirudin II - medicinal leech
N;Alternate names: thrombin inhibitor
C;Species: Hirudo medicinalis (medicinal leech)
C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 17-Jul-1998
C;Accession: S05678
R;Scharf, M.; Engels, J.; Tripier, D.
FEBS Lett. 255, 105-110, 1989
A;Title: Primary structures of new 'iso-hirudins'.
A;Reference number: S05671; MUID:90005945
A;Accession: S05678
A;Molecule type: protein
A;Residues: 1-65 <SCH>
C;Superfamily: thrombin inhibitor
C;Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F;6-14,16-28,22-39/Disulfide bonds: #status predicted

```
F;63/Binding site: sulfate (Tyr) (covalent) #status predicted


  Query Match             94.6%;  Score 348;  DB 2;  Length 65;
  Best Local Similarity   92.3%;  Pred. No. 1.3e-28;
  Matches   60;  Conservative    5;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 LTYTDCTESGQNLCLCEGSNVCGQGNKCILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP 60
          :||||||||||:|||||||||||:||||||||:||:||||||||||||||||||||||||
Db      1 ITYTDCTESGQDLCLCEGSNVCGKGNKCILGSNGEENQCVTGEGTPKPQSHNDGDFEEIP 60

Qy     61 EEYLQ 65
          |||||
Db     61 EEYLQ 65


RESULT   7
S78520
hirudin IIIa' - medicinal leech
N;Alternate names: thrombin inhibitor
C;Species: Hirudo medicinalis (medicinal leech)
C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 17-Jul-1998
C;Accession: S78520
R;Scharf, M.; Engels, J.; Tripier, D.
FEBS Lett. 255, 105-110, 1989
A;Title: Primary structures of new 'iso-hirudins'.
A;Reference number: S05671; MUID:90005945
A;Accession: S78520
A;Molecule type: protein
A;Residues: 1-65 <SCH>
C;Superfamily: thrombin inhibitor
C;Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F;6-14,16-28,22-39/Disulfide bonds: #status predicted
F;63/Binding site: sulfate (Tyr) (covalent) #status predicted


  Query Match             94.0%;  Score 346;  DB 2;  Length 65;
  Best Local Similarity   90.8%;  Pred. No. 2.1e-28;
  Matches   59;  Conservative    5;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 LTYTDCTESGQNLCLCEGSNVCGQGNKCILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP 60
          : ||||||||::|||||||||||:||||||||||||||:||||||||||||||||||||||
Db      1 VVYTDCTESGEDLCLCEGSNVCGEGNKCILGSDGEKNECVTGEGTPKPQSHNDGDFEEIP 60

Qy     61 EEYLQ 65
          |||||
Db     61 EEYLQ 65


RESULT   8
S05677
hirudin IIIb - medicinal leech
N;Alternate names: thrombin inhibitor
C;Species: Hirudo medicinalis (medicinal leech)
C;Date: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 17-Jul-1998
C;Accession: S05677
R;Scharf, M.; Engels, J.; Tripier, D.
FEBS Lett. 255, 105-110, 1989
A;Title: Primary structures of new 'iso-hirudins'.
A;Reference number: S05671; MUID:90005945
A;Accession: S05677
A;Molecule type: protein
A;Residues: 1-65 <SCH>
C;Superfamily: thrombin inhibitor
C;Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F;6-14,16-28,22-39/Disulfide bonds: #status predicted
F;63/Binding site: sulfate (Tyr) (covalent) #status predicted


  Query Match             93.8%;  Score 345;  DB 2;  Length 65;
  Best Local Similarity   92.3%;  Pred. No. 2.6e-28;
  Matches   60;  Conservative    3;  Mismatches    2;  Indels    0;  Gaps    0;

Qy      1 LTYTDCTESGQNLCLCEGSNVCGQGNKCILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP 60
          : |||||||||||||| ||||:||||||||:||||||||||||||||||||||||||||||
Db      1 VVYTDCTESGQNLCLCEDSNVCGEGNKCILGSNGEKNQCVTGEGTPKPQSHNDGDFEEIP 60

Qy     61 EEYLQ 65
          |||||
Db     61 EEYLQ 65


RESULT   9
S05675
hirudin IIIa - medicinal leech
N;Alternate names: thrombin inhibitor
C;Species: Hirudo medicinalis (medicinal leech)
C;Date: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 17-Jul-1998
C;Accession: S05675
R;Scharf, M.; Engels, J.; Tripier, D.
FEBS Lett. 255, 105-110, 1989
A;Title: Primary structures of new 'iso-hirudins'.
A;Reference number: S05671; MUID:90005945
A;Accession: S05675
A;Molecule type: protein
A;Residues: 1-65 <SCH>
C;Superfamily: thrombin inhibitor
C;Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F;6-14,16-28,22-39/Disulfide bonds: #status predicted
F;63/Binding site: sulfate (Tyr) (covalent) #status predicted


  Query Match             93.8%;  Score 345;  DB 2;  Length 65;
  Best Local Similarity   92.3%;  Pred. No. 2.6e-28;
  Matches   60;  Conservative    3;  Mismatches    2;  Indels    0;  Gaps    0;

Qy      1 LTYTDCTESGQNLCLCEGSNVCGQGNKCILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP 60
          : |||||||||||||| ||||:||||||||:||||||||||||||||||||||||||||||
Db      1 VVYTDCTESGQNLCLCEDSNVCGEGNKCILGSNGEKNQCVTGEGTPKPQSHNDGDFEEIP 60

Qy     61 EEYLQ 65
          |||||
Db     61 EEYLQ 65


RESULT  10
S05679
hirudin II' - medicinal leech
N;Alternate names: thrombin inhibitor
C;Species: Hirudo medicinalis (medicinal leech)
C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 17-Jul-1998
C;Accession: S05679
R;Scharf, M.; Engels, J.; Tripier, D.
FEBS Lett. 255, 105-110, 1989
A;Title: Primary structures of new 'iso-hirudins'.
A;Reference number: S05671; MUID:90005945
A;Accession: S05679
A;Molecule type: protein
A;Residues: 1-65 <SCH>
C;Superfamily: thrombin inhibitor
C;Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F;6-14,16-28,22-39/Disulfide bonds: #status predicted
F;63/Binding site: sulfate (Tyr) (covalent) #status predicted


  Query Match             93.2%;  Score 343;  DB 2;  Length 65;
  Best Local Similarity   90.8%;  Pred. No. 4.1e-28;
  Matches   59;  Conservative    6;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 LTYTDCTESGQNLCLCEGSNVCGQGNKCILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP 60
          :||||||||||:|||||||:|||:||||||||:||:||||||||||||||||||||||||
Db      1 ITYTDCTESGQDLCLCEGSDVCGKGNKCILGSNGEENQCVTGEGTPKPQSHNDGDFEEIP 60

Qy     61 EEYLQ 65
          |||||
Db     61 EEYLQ 65
```

RESULT 11
A37417
thrombin inhibitor (hirudin) type II precursor - medicinal leech (fragment)
C;Species: Hirudo medicinalis (medicinal leech)
C;Date: 28-Apr-1993 #sequence_revision 28-Apr-1993 #text_change 16-Jul-1999
C;Accession: A37417
R;Harvey, R.P.; Degryse, E.; Stefani, L.; Schamber, F.; Cazenave, J.P.; Courtney, M.; To
Proc. Natl. Acad. Sci. U.S.A. 83, 1084-1088, 1986
A;Title: Cloning and expression of a cDNA coding for the anticoagulant hirudin from the
A;Reference number: A37417; MUID:86149219
A;Accession: A37417
A;Status: preliminary; not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-72 <HAR>
A;Cross-references: GB:M12693; NID:g159224; PIDN:AAA29195.1; PID:g159225
C;Superfamily: thrombin inhibitor

Query Match 90.5%; Score 333; DB 2; Length 72;
Best Local Similarity 87.7%; Pred. No. 4.7e-27;
Matches 57; Conservative 6; Mismatches 2; Indels 0; Gaps 0;

Qy 1 LTYTDCTESGQNLCLCEGSNVCGQGNKCILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP 60
:||||||||||||||||||||||:||||||||:|: |||||||||| |:|||:|||||||
Db 8 ITYTDCTESGQNLCLCEGSNVCGKGNKCILGSNGKGNQCVTGEGTPNPESHNNGDFEEIP 67

Qy 61 EEYLQ 65
|||||
Db 68 EEYLQ 72

RESULT 12
A24350
thrombin inhibitor (hirudin PA) - medicinal leech
N;Alternate names: hirudin (plasminogen activator-type)
C;Species: Hirudo medicinalis (medicinal leech)
C;Date: 31-Mar-1988 #sequence_revision 31-Mar-1988 #text_change 18-Jun-1993
C;Accession: A24350
R;Dodt, J.; Machleidt, W.; Seemuller, U.; Maschler, R.; Fritz, H.
Biol. Chem. Hoppe-Seyler 367, 803-811, 1986
A;Title: Isolation and characterization of hirudin isoinhibitors and sequence analysis c
A;Reference number: A24350; MUID:87026247
A;Accession: A24350
A;Molecule type: protein
A;Residues: 1-66 <DOD>
C;Superfamily: thrombin inhibitor

Query Match 85.6%; Score 315; DB 2; Length 66;
Best Local Similarity 87.1%; Pred. No. 2.9e-25;
Matches 54; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

Qy 1 LTYTDCTESGQNLCLCEGSNVCGQGNKCILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP 60
:|||||||||||||||||||||:|||||||| |: |||||||||||||| |||| ||
Db 1 ITYTDCTESGQNLCLCEGSNVCGKGNKCILGSQGKDNQCVTGEGTPKPQSHNQGDFEPIP 60

Qy 61 EE 62
|:
Db 61 ED 62

RESULT 13
S05672
hirudin I - medicinal leech (fragments)
N;Alternate names: thrombin inhibitor
C;Species: Hirudo medicinalis (medicinal leech)
C;Date: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 17-Jul-1998
C;Accession: S05672
R;Scharf, M.; Engels, J.; Tripier, D.
FEBS Lett. 255, 105-110, 1989
A;Title: Primary structures of new 'iso-hirudins'.
A;Reference number: S05671; MUID:90005945
A;Accession: S05672
A;Molecule type: protein
A;Residues: 1-55 <SCH>
C;Superfamily: thrombin inhibitor
C;Keywords: anticoagulant; serine proteinase inhibitor; sulfoprotein
F;6-14/Disulfide bonds: #status predicted
F;53/Binding site: sulfate (Tyr) (covalent) #status predicted

Query Match 78.3%; Score 288; DB 2; Length 55;
Best Local Similarity 81.5%; Pred. No. 1.3e-22;
Matches 53; Conservative 1; Mismatches 1; Indels 10; Gaps 1;

Qy 1 LTYTDCTESGQNLCLCEGSNVCGQGNKCILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP 60
: ||||||||||||| |||||||||||||||||||||||||||||||||
Db 1 VVYTDCTESGQNLCLCE----------CILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP 50

Qy 61 EEYLQ 65
|||||
Db 51 EEYLQ 55

RESULT 14
A53883
hirudin HV1 homolog bufrudin - leech (Hirudinaria manillensis)
C;Species: Hirudinaria manillensis
C;Date: 27-Sep-1994 #sequence_revision 18-Nov-1994 #text_change 09-Mar-1996
C;Accession: A53883
R;Electricwala, A.; Hartwell, R.; Scawen, M.D.; Atkinson, T.
J. Protein Chem. 12, 365-370, 1993
A;Title: The complete amino acid sequence of a hirudin variant from the leech Hirudin
A;Reference number: A53883; MUID:94000343
A;Accession: A53883
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-63 <ELE>
A;Experimental source: head portions
A;Note: sequence extracted from NCBI backbone (NCBIP:139162)
C;Superfamily: thrombin inhibitor

Query Match 67.7%; Score 249; DB 2; Length 63;
Best Local Similarity 67.7%; Pred. No. 1.3e-18;
Matches 44; Conservative 8; Mismatches 11; Indels 2; Gaps 1;

Qy 1 LTYTDCTESGQNLCLCEGSNVCGQGNKCILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP 60
::|||||||||| ||| ||||||:| | | | | |||| |||||||:| :|||||||
Db 1 VSYTDCTESGQNYCLCVGSNVCGEGKNCQLSSSG--NQCVHGEGTPKPKSQTEGDFEEIP 58

Qy 61 EEYLQ 65
:| ::
Db 59 DEXIK 63

RESULT 15
S33329
hirudin HM2 - leech (Hirudinaria manillensis)
C;Species: Hirudinaria manillensis
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 16-Jul-1999
C;Accession: S33329
R;Scacheri, E.; Nitti, G.; Valsasina, B.; Orsini, G.; Visco, C.; Ferrera, M.; Sawyer,
Eur. J. Biochem. 214, 295-304, 1993
A;Title: Novel hirudin variants from the leech Hirudinaria manillensis. Amino acid se
A;Reference number: S33328; MUID:93285156
A;Accession: S33329
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-84 <SCA>
A;Cross-references: EMBL:X72786; NID:g312674; PIDN:CAA51293.1; PID:g312675
C;Genetics:
A;Introns: 21/1; 37/3; 61/1
C;Superfamily: thrombin inhibitor

Query Match 67.1%; Score 247; DB 2; Length 84;
Best Local Similarity 71.0%; Pred. No. 2.8e-18;
Matches 44; Conservative 6; Mismatches 10; Indels 2; Gaps 1;

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Qy       1 LTYTDCTESGQNLCLCEGSNVCGQGNKCILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP 60
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Db      21 VSYTDCTESGQNYCLCVGSNVCGEGKNCQLSSSG--NQCVHGEGTPKPKSQTEGDFEEIP 78

Qy      61 EE 62
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Db      79 DE 80
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Search completed: June 24, 2002, 20:51:16
Job time: 160 sec